



NATIONAL ASSOCIATION OF THE DEAF

814 THAYER AVENUE • SILVER SPRING, MARYLAND • 20910-4500
HEADQUARTERS: 301-587-1788 VOICE • 301-587-1789 TTY • 301-587-1791 FAX
BOOKSTORE: 301-587-6282 VOICE • 301-587-6283 TTY • 301-587-4873 FAX

May 7, 1996

Mr. William F. Caton
Office of the Secretary
Federal Communications Commission
1919 M Street, N.W., Room 222
Washington, D.C. 20554

MAY - 7 1996

Re: Reply Comments in the Matter of Federal-
State Joint Board on Universal Service
CC Docket No. 96-45

Dear Mr. Caton:

Enclosed please find the original and four copies of Reply Comments of the National Association of the Deaf and the Consumer Action Network in the above-referenced proceeding.

I would appreciate your referring all correspondence regarding this matter to my attention.

Sincerely,

Karen Peltz Strauss

Karen Peltz Strauss
Legal Counsel for
Telecommunications Policy

Enclosures

cc: International Transcription Service
Ernestine Creech (on diskette)

No. of copies rec'd. 024
DATE 5/9/96

RECEIVED

MAY - 7 1996

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Federal-State Joint Board on) CC Docket No. 96-45
Universal Service)
)

REPLY COMMENTS OF
THE NATIONAL ASSOCIATION OF THE DEAF
AND
THE CONSUMER ACTION NETWORK

By: Karen Peltz Strauss
Legal Counsel for Telecommunications
Policy
National Association of the Deaf
814 Thayer Avenue
Silver Spring, Maryland 20910-4500
301-587-1788 Voice
301-587-1789 TTY
301-587-1791 Fax

May 7, 1996

TABLE OF CONTENTS

SUMMARY	iii
I. Introduction	1
II. The Access Needs of Individuals with Disabilities Must be Considered and Addressed in our Nation's Universal Service Policies	2
A. Section 254(b)(7) Requires the Joint Board and the Commission to Consider the Needs of Individuals with Disabilities in the Development of Universal Service Policies	4
B. Section 254(b)(3) Directs the Joint Board and the Commission to Ensure Universal Telephone Service for Low Income Consumers with Disabilities	8
C. Individuals with Disabilities Must be Included within Universal Service Principles because they are Consumers in "Insular" Areas.	9
III. Universal Service Support Mechanisms Should Fund Specialized Customer Premises Equipment	11
IV. The Commission Must Consider the Needs of Individuals with Disabilities when Defining other "Core" Services Eligible for Universal Service Support	14
A. Touch Tone Service	14
B. Access to Emergency Services	15
V. Periodic Reviews of Universal Service Mechanisms Must take into Account the Access Needs of Individuals with Disabilities	16
VI. The Access Needs of Students with Disabilities Must be Considered in Universal Service Requirements for Classrooms	18
VII. Principles of Affordability Must Consider Costs to Individuals with Disabilities	19
VIII. Efforts to Publicize the Availability of Services Subsidized by Federal Support Mechanisms Must be in Accessible Format	21

IX.	Provisions for Free Access to Telephone Service Information Must Include Relay Calls for this Purpose . .	22
X.	Conclusion	23

SUMMARY

The Telecommunications Act of 1996 directs the Joint Board and the Commission to adopt universal service principles that will enable all Americans to have access to basic and advanced telecommunications services at just, reasonable, and affordable rates. These principles are intended to supplement, rather than replace, already existing principles of universal service that have characterized the 1934 Communications Act. Toward this end, the actions of the Joint Board and the Commission must give significant weight to more than a decade of federal legislative and administrative actions to expand telecommunications access for individuals with disabilities, all founded upon the universal service obligation. Through legislation such as the Telecommunications for the Disabled Act of 1982, the Hearing Aid Compatibility Act of 1988, and Title IV of the Americans with Disabilities Act, Congress has persisted in its conviction that universal service cannot be achieved without addressing the needs of these individuals.

Directives in the 1996 Telecommunications Act provide additional bases for the Joint Board to consider the access needs of individuals with disabilities in the development of our nation's universal service principles. The mandate to ensure that low-income consumers have access to telecommunications and information services must necessarily include addressing accessibility issues because the incomes of individuals with disabilities are disproportionately lower than that of the

general population. In addition, because the lack of basic access to telecommunications services has succeeded in isolating individuals with communication disabilities for much of the past century, these individuals fall within the definition of an "insular" people, and similarly are guaranteed universal service protections under the 1996 Act.

For Americans with disabilities, new telecommunications technologies are frequently not a luxury, but rather are indispensable to their ability to fully participate in an information-based society. The failure to consider the access needs of these individuals in the past has all too often resulted in insurmountable communication barriers that have diminished and often eliminated employment, educational, and recreational opportunities. In order to remedy this, and to avoid a repetition of the discrimination that has characterized so much of this century, universal support mechanisms must be used to ensure that telecommunications and information services are accessible to individuals with disabilities. Among other things, this can include support for specialized equipment distribution programs, discounted TTY toll rates, accessible alternatives to voice-based touch tone services, enhanced 911 services, and accessible services and equipment in our nation's classrooms.

In the Matter of)
)
Federal-State Joint Board on) CC Docket 96-45
Universal Service)
)

The National Association of the Deaf and
The Consumer Action Network

The National Association of the Deaf and the Consumer Action Network (NAD et. al.) collectively submits these reply comments in response to the Notice of Proposed Rulemaking and Order Establishing Joint Board, FCC 96-93 (released March 8, 1996) ("Notice") in which the Federal Communications Commission ("FCC" or "Commission") has sought comment on implementing the universal service mandates of the Telecommunications Act of 1996 ("1996 Act").

The NAD is the nation's largest organization safeguarding the accessibility and civil rights of 28 million deaf and hard of hearing Americans in education, employment, health care, and telecommunications. The NAD is a private, non-profit federation of 51 state association affiliates including the District of Columbia, organizational affiliates, and direct members. The NAD seeks to assure a comprehensive, coordinated system of services that is accessible to Americans who are deaf and hard of hearing,

enabling them to achieve their maximum potential through increased independence, productivity, and integration.

The Consumer Action Network (CAN) is a coalition of nineteen national organizations of, by, and for deaf and hard of hearing people.² CAN addresses advocacy and legislative issues important to its constituency. Such issues include protecting the rights of deaf and hard of hearing persons, improving quality of life, empowering consumer leadership and self-representation, and ensuring equal access to education, employment, communication, technology, and community life.

II. The Access Needs of Individuals with Disabilities Must be Considered and Addressed in our Nation's Universal Service Policies.

In the Telecommunications Act of 1996, Congress stated its strong commitment to develop a nationwide universal service policy which enables all Americans to have access to advanced telecommunications and information services at just, reasonable, and affordable rates.³ This directive is explicit in its

² CAN's regular members are: American Association of the Deaf-Blind, American Athletic Association of the Deaf, American Society for Deaf Children, Association of Late Deafened Adults, Deaf Women United, Inc., Gallaudet University Alumni Association, National Association of the Deaf, National Black Deaf Advocates, National Congress of Jewish Deaf, National Fraternal Society of the Deaf, National Hispanic Council of Deaf and Hard of Hearing People, and Telecommunications for the Deaf, Inc. CAN's affiliate members are: Association of College Educators: Deaf and Hard of Hearing, American Deafness and Rehabilitation Association, Convention of American Instructors of the Deaf, The Caption Center, Conference of Educational Administrators Serving the Deaf, Inc., National Captioning Institute, and Registry of Interpreters for the Deaf, Inc.

³ 1996 Act §254(b).

breadth and scope, i.e. as our nation's telecommunications technologies expand, all Americans are to reap the benefits of these technologies.

For one group of Americans, these technologies hold particular promise. Specifically, new telecommunications technologies promise to facilitate and improve the way in which individuals with disabilities can utilize and enjoy telephone communications, television, and other services that provide a vital link to the mainstream of our society. As explained in comments submitted by the American Foundation of the Blind (AFB), for millions of individuals with disabilities, accessible telecommunications technologies are frequently not a luxury, but rather a necessity because these individuals may have no other means of participating in an information-based society.⁴ Indeed, the Internet's Email services, together with its volumes of textual information have rapidly become indispensable for communication among, and information gathering by, persons who are deaf and hard of hearing.

Congress recognized the need to consider individuals with disabilities in our nation's telecommunications policies in Section 255 of the Telecommunications Act of 1996. That section requires manufacturers and telecommunications services providers to ensure that their equipment and services are accessible to and usable by individuals with disabilities, if readily achievable.

⁴ AFB Comments at 2. AFB demonstrates this point by noting that accessible communications networks now enable people who are blind to read newspapers.

Although this section will hopefully go a long way toward ensuring accessible products and services, many of the issues which are now before the Joint Board and the Commission, including who will be eligible to benefit from universal service support mechanisms, will not be covered by Section 255.⁵ For this and other reasons, it is incumbent upon the Joint Board and the Commission to address the access needs of individuals with disabilities in the development and implementation of the new universal service policies.

A. Section 254(b)(7) Requires the Joint Board and the Commission to Consider the Needs of Individuals with Disabilities in the Development of Universal Service Policies.

Section 254(b)(7) of the Telecommunications Act of 1996 directs the Joint Board and the Commission to adopt universal service policies that are necessary for the protection of the public interest, convenience, and necessity. As noted above, Congress, in the 1996 Act itself, has already construed disability access to be in the public interest. Yet Congress' recent action does not stand in isolation. In fact, this action follows more than a decade of federal legislative and administrative actions designed to expand telecommunications access for individuals with disabilities. Virtually all of these

⁵ Indeed, the fact that individuals with disabilities are covered by other sections of the Telecommunications Act as well does not in any way lessen the responsibility to include these individuals within our nation's universal service policies. As shown below, a failure to include such individuals would run counter to virtually every Congressional action taken on the matter of telecommunications access for these individuals.

federal endeavors were founded upon the universal service obligation.

The Communications Act of 1934 first established the concept of universal service with the requirement that the Commission "make available, so far as possible to all the people of the United States, a rapid, efficient, Nation-wide, and world-wide wire and radio communications service with adequate facilities at reasonable charges"⁶ It is precisely this universal service obligation upon which Congress relied in passing its very first piece of legislation on disability access to telecommunications services, the Telecommunications for the Disabled Act of 1982.⁷ Specifically, the 1982 Act was intended to counter the potentially adverse effects of an FCC ruling, Computer II, in which the Commission had ordered telephone companies to separate the sale and rental of customer premises equipment from their regulated services.⁸ Because many telephone companies had been offsetting the high costs of providing specialized telephone equipment with revenues from other services, it was feared that the FCC's action would result in requiring persons with

⁶ 47 U.S.C. 151.

⁷Pub. L. No. 97-410, codified as amended at 47 U.S.C. §610 (1988).

⁸Second Computer Inquiry ("Computer II"), 77 F.C.C. 2d 384, 446-47 (1980), recon. 84 F.C.C. 2d 50 (1981), further recon. 88 FCC 2d 512 (1981), aff'd sub nom. Computer & Communications Indus. Assoc. v. FCC, 693 F. 2d 198 (D.C. Cir. 1982).

disabilities to bear the full costs of their equipment⁹. To avoid this, Congress relied upon the FCC's universal service obligation in allowing the states to require carriers to continue providing subsidies for specialized equipment needed by persons with hearing, speech, vision or mobility disabilities:¹⁰

Disabled persons who are unable to afford the full costs of [specialized] equipment will lose access to telephone service. This would disserve the statutory goal of universal service, deprive many individuals of the opportunity to have gainful employment . . . The costs to society of such lost access, including impairment of the quality of lives for disabled Americans, far exceed the costs of maintaining service that the current system allows telephone companies to include in their general revenue requirements.¹¹

Similarly, beginning with the 1982 Act, Congress has consistently employed the universal service obligation to require that certain telephones be hearing aid compatible.¹² The obligation to provide compatible telephones was further expanded in the Hearing Aid Compatibility Act of 1988, in which Congress directed that nearly all telephones made or imported into the United States after August 16, 1989 be compatible for use with telecoil-equipped hearing aids.¹³ Again, Congress concluded

⁹ Such equipment includes, for example, text telephones (TTYs), artificial larynxes, telebraille machines, and breath-activated telephones.

¹⁰ 47 U.S.C. §610(g).

¹¹ H.R. Rep. No. 888, 97th Cong., 2d Sess. 4 (1982) (emphasis added).

¹² 47 U.S.C §610(b).

¹³ Pub. L. No. 100-394, codified at 47 U.S.C. §610 (1988).

that complete and equal access for persons with disabilities was mandated by the 1934 universal service obligation, noting that advances in technology now required that such individuals be included in "all the people" referred to in the original universal service obligation language.¹⁴

Finally, in 1990, Congress enacted Title IV of the Americans with Disabilities Act (ADA), requiring the establishment of nationwide 24 hour telecommunications relay services.¹⁵ Congress made clear that the requirement for relay services was the logical extension of its prior efforts to achieve universal telephone service for Americans with hearing disabilities. Indeed, the language of Title IV itself tracks the statutory language that established the original universal service obligation.¹⁶ Congress once again explained its reliance on

¹⁴ H.R. Rep No. 674, 100th Cong., 2d Sess. 7 (1988). Noting that the telephone is a "major and indispensable part in the business and social lives of all Americans," the House Committee on Energy and Commerce concluded that, without telephone access, individuals with hearing disabilities "are put at a significant disadvantage, *id.* at 3, [and that] . . . [t]he inability to use all the telephones imposes social and economic costs on not only the hearing impaired, but the whole nation." *Id.* at 7.

¹⁵ Pub. L. No. 101-336, codified at 47 U.S.C. §225. Prior to the 1990 legislation, Congress had also enacted the Telecommunications Accessibility Enhancement Act of 1988 which established a federal relay system for calls to, from, and within the federal government. Pub. L. No. 100-542, codified at 40 U.S.C. §762 (1988).

¹⁶ Title IV provides: "In order to carry out the purposes established under section 1, to make available to all individuals in the United States a rapid, efficient nationwide communications service, and to increase the utility of the telephone system of the Nation, the Commission shall ensure that interstate and intrastate telecommunications relay services are available to the extent possible and in the most efficient manner, to hearing impaired and

this obligation:

The goal of universal service has governed the development of the Nation's telephone system for over fifty years. The inability of over twenty-six million Americans to access fully the Nation's telephone system poses a serious threat to the full attainment of the goal of universal service.¹⁷

The above Congressional actions set the historical stage for inclusion of individuals with disabilities within our nation's universal service policies. Below, we discuss additional directives within the 1996 Act itself which provide further support for consideration of these access needs by the Joint Board and the Commission.

B. Section 254((b)(3) Directs the Joint Board and the Commission to Ensure Universal Telephone Service for Low Income Consumers with Disabilities.

The history of our nation's telecommunications policies with respect to individuals with disabilities provides ample reason for the Joint Board and the Commission to consider the needs of such individuals when supplementing our nation's universal service principles. In addition, however, Section 254(b)(3) requires the Joint Board and the Commission to base universal service policies on a number of principles, the third of which requires that "low-income consumers . . . have access to telecommunications and information services".

speech impaired individuals in the United States". 47 U.S.C. 225(b) (emphasis added).

¹⁷ S. Rep No. 116, 101st Cong., 1st Sess. 77-78 (1989); see also 136 Cong. Rec. H2432 (daily ed. May 17, 1990) (statement of Rep. Dingell).

In its reply comments to this docket, the United Cerebral Palsy Association (UCPA) has provided statistics which demonstrate that individuals with disabilities, as a group, have among the lowest incomes in the United States. Specifically, UCPA cites to a 1991-92 report by the Bureau of the Census which notes that only 23.2 percent of individuals with severe disabilities between the ages of 21 and 64 are employed. Additionally, according to the report cited by UCPA, only 58 percent of individuals "unable to hear a normal conversation" are employed. UCPA also cites statistics showing that families headed by a person with a disability are amongst the poorest in the nation. Because the incomes of individuals with disabilities are disproportionately lower than that of the general population, the access needs of these individuals must be considered in any and all efforts to make telecommunications and information services universally available.

C. Individuals with Disabilities Must be Included within Universal Service Principles Because They are Consumers in "Insular" Areas.

Section 254(b)(3) of the 1996 Act also requires the Joint Board to consider consumers in rural, insular, and high cost areas in the development of the nation's universal service policies. Individuals who are deaf and hard of hearing should be included in this category of individuals as well.

Webster's New Collegiate Dictionary (9th Ed. 1983) defines "insular" as "characteristic of an isolated people." Indeed, lack of basic access to the telecommunications network for most

of this past century resulted in considerable isolation and dependence for the overwhelming majority of individuals with hearing disabilities. It is only recently -- within the past three years -- that these individuals have begun to achieve the most basic type of access to plain old telephone service, through the establishment of a nationwide telecommunications relay system. Although other text dependent technologies such as fax machines and on-line services have also begun to break down the barriers to equal access, many of these services are costly and are not yet reaching a majority of the population of individuals with hearing disabilities. By and large, then, telecommunications access for deaf and hard of hearing Americans lags far behind that available to the rest of our society.¹⁸ Because these individuals were not afforded any telecommunications access whatsoever throughout most of this century, deaf and hard of hearing individuals have not shed the characteristics of an "isolated" or "insular" people, owed the

¹⁸ The following limitations of relay services, upon which text telephone (TTY) users depend for most of their telephone communications, demonstrate this point: (1) Relay services are ineffective in completing audiotext calls that utilize interactive prompts, 900 calls requiring fees, and many pre-recorded messages; (2) Because most relay services utilize the Baudot format, conversations can take place in only one direction at a time (using the half-duplex mode) (3) Relay calls transmit conversations at a rate far slower than the speed of voice-to-voice communications, adding to the long distance costs of relay users; and (4) relay services cannot complete long distance coin-sent-paid calls from public telephones (technological difficulties prevent the exchange of coin deposits and signalling information). In addition, to date, many hearing individuals remain unfamiliar, and consequently, reluctant to use relay services. Often these individuals simply hang up on a relay caller, assuming such call to be a solicitation.

protections of Section 254(b)(3).

III. Universal Service Support Mechanisms Should Fund
Specialized Customer Premises Equipment.

Section 254(c)(1) of the 1996 Act requires the Joint Board and the Commission to define the services to be supported by Federal universal service support mechanisms. Accordingly, the Commission has requested comment on the extent to which certain "core" services should be designated to receive universal service support.¹⁹ First, the Commission has proposed support for "voice grade access to the public switched network," noting such service to be indispensable.

We agree that basic access to the public switched network meet the criteria of Section 254(c)(1) because, as the Commission notes, such access "enable[s] consumers to reach schools, emergency medical assistance, doctors, law enforcement authorities, and fire departments."²⁰ To date, however, basic access to the network comes at a very high price for consumers with disabilities -- a price which many of these consumers cannot afford. Specifically, these consumers typically must purchase specialized customer premises equipment or other peripheral devices to "hook up" to the public switched network. The costs of these devices - averaging from a few hundred dollars for a TTY to as much as \$3000 for a telebraille - are above and beyond the cost of basic telephone equipment needed by the general

¹⁹ Notice at ¶16.

²⁰ Id.

population, and are frequently enough of a deterrent to subscribership for these consumers.

In its Notice, the Commission expresses concerns about low subscribership levels among low-income individuals, noting that such levels fall substantially below the national average.²¹ We submit that a factor contributing to such poor subscribership is the inability of low-income individuals with disabilities to afford the equipment necessary to subscribe to basic telephone services.

In the early to mid 1980's a number of states began to recognize this predicament and took action to increase the subscribership levels of their residents who were disabled. These states established equipment distribution programs that either distribute these devices free of charge, offer free loans for the devices, or offer discounted prices for the purchase or rental of these devices.²² These programs have distributed equipment including, but not limited to, TTYs, signalling devices, including flashing light devices for individuals who are deaf, loud ringers for persons who are hard of hearing, or vibrating devices for persons who are deaf-blind, telebraille machines for deaf-blind individuals, amplifiers and volume control telephones, artificial larynxes, breath activated

²¹ Notice at ¶50.

²² The proliferation of these programs was in part a response to the deregulation of specialized customer premises equipment in the early to mid 1980's. However, the growth of such programs has slowed considerably in more recent years.

telephones, and computer modems. Some states also ensure that their programs fund the ongoing introduction of state-of-the-art technology needed to facilitate the use of telecommunications by individuals from their home and place of employment. Typically, the monies for each of these programs have come from a state established trust fund that is financed through subscriber line surcharges or contributions from the telephone companies in the state.

Unfortunately, approximately half of the states in our nation remain without any equipment distribution programs whatsoever. In addition, because of limited funding, most states that have programs do not offer the full variety of equipment needed to access the network by people with disabilities, but rather restrict their distribution to a limited selection of devices. Funding shortages force other states to impose a complex system of priorities to receive the equipment, based on income, degree of impairment, family size, and living arrangements. As a consequence, equipment distribution programs vary widely in their success at providing access for the disabled community.

The Commission cannot hope to achieve its goal of ensuring universal service to the public switched telecommunications network as long as so large a percentage of our population remains without the basic tools to access that network. Accordingly, we urge that the universal service support mechanisms be used in part to ensure the provision of specialized

customer premises equipment to individuals with disabilities through programs in all fifty states. In addition, we urge that such funds be available for the placement of specialized customer premises equipment in other locations which have frequent need for this equipment, but which are otherwise unable to afford the purchase of such equipment.²³

IV. The Commission Must Consider the Needs of Individuals with Disabilities When Defining other "Core" Services Eligible for Universal Service Support.

The FCC identifies four other "core" services which should receive universal service support: touch tone service, single party service, access to emergency services, and access to operator services. We offer the following comments with respect to two of these items.

A. Touch Tone Service

The FCC explains that touch tone services are becoming indispensable in that they are needed to interact with increasingly prevalent automated information systems. Yet interactive voice telephone services remain virtually unusable for TTY users. As noted above, typically TTY users access the voice-based telephone network through a relay system. But in a typical relay call, communication assistants (i.e. relay operators) do not have sufficient time to respond to interactive

²³ For example, Colorado's program has permitted the distribution of special equipment to state, city and municipal offices. In addition, Nevada's Rehabilitation Division has placed TTYs in various social service agencies, including hospitals and libraries, and Illinois' program has provided for the distribution of TTYs to organizations representing disabled individuals.

prompts after relaying the choices to the TTY users.

The FCC requests parties to provide information regarding services other than touch-tone that would serve the same general function as touch-tone service.²⁴ Relatively new, but costly technologies can enable TTYs to interface with TTY-based automated systems. The FCC has noted that access to automated information systems "may be essential for effective use of educational services, [and that such access] increases the speed at which subscribers are able to reach emergency service providers."²⁵ Accordingly, we urge that universal service support be allocated for technologies which enable TTY users to access automated educational and emergency services.

B. Access to Emergency Services

The FCC requests comment on whether access to enhanced 911 services, including automatic number identification and automatic location information, should be among the services that receive universal service support. We agree that these services should be included within the core services receiving universal service support.

Since 1992, the ADA has required all state and locally operated 911 systems to be accessible to TTYs. While progress has been made toward this goal, many emergency systems throughout the country remain inaccessible to deaf callers. Often 911 personnel are simply not familiar with the method by which they

²⁴ Notice at ¶19.

²⁵ Notice at ¶19.

must handle TTY calls; frequent turnover in personnel staff further aggravates this situation. The consequence is that all too often, 911 personnel, not hearing a voice at the other end of the call, simply hang up on an emergency caller. Automatic number and location information has been effective in providing quick and efficient responses to TTY calls. With these enhanced services, 911 personnel have immediate information as to whether the caller is deaf or hard of hearing. This alerts the 911 dispatcher to use a TTY, and eliminates the time wasted trying to establish voice contact with a caller. Because these enhanced features offer a significant improvement in communication with TTY callers, we agree that they are "essential to public health[] or public safety."²⁶

V. Periodic Reviews of Universal Service Mechanisms Must take into Account the Access Needs of Individuals with Disabilities

The Commission acknowledges its newly created statutory obligation to "ensure that the definition of services supported by universal service support mechanisms and those mechanisms themselves evolve as advances in telecommunications and information technologies continue to present consumers with an ever increasing array of telecommunications and information services."²⁷ Accordingly, it promises to periodically review, based on Joint Board recommendations, the definition of services supported by universal service mechanisms, and seeks guidance on

²⁶ Notice at ¶21, citing 1996 Act §(c)(1)(A).

²⁷ Notice at ¶2.

how to evaluate that definition in the future.

As we noted above, universal service should have as its goal a telecommunications infrastructure that is equally available to all Americans. Lack of access to telephone service has been a major factor contributing to the isolation of individuals with hearing, speech and other communication disabilities. As emerging technologies expand the concept of universal service beyond "plain old telephone service," it is critical that the needs of such individuals be considered to ensure full participation in the benefits that these technologies may confer. Accordingly, we urge the adoption of two basic principles with regard to periodic reviews of the list of services receiving universal service support:

1. When a particular service is identified for universal service support, the costs of funding access to that service for individuals with disabilities must be included in calculating the support needed. This will ensure that as new services and technologies are added to the definition of universal service, safeguards will be in place to ensure that such services or technologies can provide access to all Americans;²⁸ and

2. In determining which services should be added to the universal service list, consideration must be given as to how each of these services can serve the disabled community in the

²⁸ As noted above, this already applies to touch tone service. If the FCC chooses to include such service within its universal service list, requirements should also be in place to ensure that the services accessed through automated systems via touch tone phones are accessible to TTY users.

quest for improved health care, educational opportunities and employment. Where it is demonstrated that a particular service can improve the ability of individuals with disabilities to participate in the mainstream of our society, such factor should be given considerable weight in the decision to add that service to the universal service list.

VI. The Access Needs of Students with Disabilities Must be Considered in Universal Service Requirements for Classrooms.

Congress was explicit in directing the Joint Board and the Commission to address access to telecommunications services by children in kindergarten to 12th grade classrooms.²⁹ As the FCC notes, two-way interactive capabilities will enable students to participate in educational activities both within their schools and with other schools. We agree that "[e]xposure to telecommunications services for our nation's school children will provide them with skills needed for jobs in a technologically advanced society."³⁰ For this very reason it is critical for the Joint Board and the Commission to require that all telecommunications services in the classroom be accessible to children with disabilities. In the past, the failure to consider communication access needs during the initial stages of telecommunications development has created insurmountable communication barriers for individuals with disabilities. Accordingly, whatever Federal support mechanisms are established

²⁹ 1996 Act §254(h).

³⁰ Notice at ¶72.

for these classrooms, sufficient monies should be appropriated for access by students with disabilities.

One example will illustrate this point. In discussing teleconferencing capabilities between the schools, the Commission notes that while certain speed links may be adequate for talking head style lectures, high quality full motion video in real-time may require a higher capacity, higher speed link. It is the latter that would be necessary, and should be incorporated into universal service principles, to enable two way interactive conferencing in sign language for deaf students. Considerations such as these are critical in planning for telecommunications access by the schools.

VII. Principles of Affordability Must Consider Costs to Individuals with Disabilities

The 1996 Act requires telecommunications services to be available at just, reasonable, and affordable rates. The FCC seeks comment proposing standards for evaluating the affordability of telecommunications services, and notes, in particular that its inquiry is not limited to the narrow category of telephone exchange service, but rather extends to all telecommunications services in general.

Historically, nondiscrimination principles have dictated that individuals with disabilities pay no more for access to telecommunications services than is required by the general public. For example, the Communications Act requires that "users